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# The Coal Question in Germany

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## COAL SUPPLIES

**T**HE supplies of coal to a depth of 1,200 meters are:

Hard coal, 1,945 billion tons.

Brown coal, 78 billion tons.

Of the hard coal there are 9 billion 800 million tons in Saar Valley, which has been separated from Germany by the conditions of the Peace Treaty of

the present flourishing condition, exclusively to the German administration and the German efficiency.

The remaining deposits are divided among several smaller regions.

The column of figures shows for the time being the reduction caused by the beginning of the war. In the annual figures the year 1915 shows the lowest

## HARD COAL PRODUCTION, 1913-1919

*In 1,000 Tons*

	1913	1914	1915	1916	1917	1918	1919
Germany.....	191,511	161,535	146,712	158,847	167,311	160,908	118,863
Ruhr.....	114,536	98,260	86,794	94,163	99,055	95,942	70,885
Upper Silesia.....	43,801	37,257	38,299	41,985	42,944	39,882	25,789
Saar Valley.....	12,223	9,276	8,218	8,782	9,613	9,214	7,612
Lower Silesia.....	5,527	4,888	4,457	4,555	4,582	4,649	4,110
Saxony.....	5,470	4,836	4,272	4,174	4,770	4,609	3,932
Aachen.....	3,264	2,734	2,257	2,501	2,514	2,526	2,187

Versailles for the next fifteen years. In Upper Silesia have been found 106 billion 700 million tons, more than half of the whole coal supply of Germany. Out of this one instance already can be seen how eminently important the Germans consider this industry region in Upper Silesia, which owes its whole existence, from the first beginning to

amount of production. The efforts which were made on account of the "Hindenburg Policy" in the entire war industry brought the production of 1917 again to the high level of 167 million tons. November, 1918, brought a revolution, in consequence of which the working hours were shortened, and the almost endless number

## COKE PRODUCTION, 1913-1919

*In 1,000 Tons*

1913	1914	1915	1916	1917	1918	1919
32,167	27,324	26,359	33,023	33,639	33,411	21,989

of strikes reduced the production in the year of 1919 to the low level of 118 million tons. The year 1920 promises no better result.

The production of the Saar Valley has been withdrawn from Germany. Regarding the fate of Upper Silesia nothing definite has been decided at the time of this writing, the beginning of August, 1920. Although in the balance of the coal supplies Upper Silesia shows more than half of the total, its total production shows only a quarter.

The quantity of coal necessary for the production of coke is contained in the above figures.

#### BROWN COAL PRODUCTION, 1913-1919

The brown coal is of considerably less value than the hard coal. It has only from two-ninths to three-ninths

duction and did not suffer through the revolution any such severe relapse as the hard-coal mining. The reason for this lies in the fact that more brown coal is mined in a day's time. In mining brown coal, machinery can be used to a great advantage. Further, the shortening of working hours could be better taken care of by working three shifts instead of two. This, of course, required a larger number of laborers, but as they did not have to be skilled laborers they could easily be secured. Above all, in the consideration of these figures it should be noticed that the impossibility of getting hard coal induced many consumers, especially chemists and electricians, to erect their new plants in the brown coal region. Later on this question will come up again. The fact should be

#### BROWN COAL PRODUCTION, 1913-1919

*In 1,000 Tons*

	1913	1914	1915	1916	1917	1918	1919
Raw brown coal . . . . .	87,116	83,947	88,369	94,331	95,553	100,668	93,820
Brown coal briquettes . . . . .	21,418	21,448	23,350	24,061	22,048	23,112	19,601

of the heat value of the hard coal. Its use as raw coal is limited. As a result, the greater quantity is briquetted. Approximately three tons of raw brown coal are required for one ton of briquettes. The following table gives the production of raw brown coal and also the production of briquettes. Attention is called to the fact that the amount of raw brown coal used for briquettes is given in the raw brown coal production.

The difference in the production of brown coal compared with that of hard coal can be seen at a glance. The brown coal mining was able to increase its production above the Peace pro-

brought out that the relatively favorable figures of the brown coal are the result of a war policy carried out by every means of the war administration and that a further increase can only be expected gradually.

#### IMPORT AND EXPORT

Germany, before the war, had a surplus of coal. In spite of this, it was not only an export but also an import country. This remarkable fact explains itself, because the German coal regions are almost all on the border of the empire, therefore favorable for export but unfavorable for the coast regions of the North and Baltic

Seas, which, consequently, had to rely on the English coal which could be delivered cheaper by waterway than could German coal.

So for the year 1913 the result was an export surplus of about 26 million tons of coal, all kinds of coal included. A surprising figure is the import of almost 7 million tons of raw brown coal. Into consideration here comes the

The imported hard coal comes entirely from England.

From the exported coal 12 million tons of hard coal went to Austria-Hungary and smaller amounts went to the Netherlands, Belgium, France, Russia, Switzerland and northern countries.

The war naturally caused a complete change in the export trade. The im-

#### IMPORTS AND EXPORTS OF COAL INTO AND OUT OF GERMANY IN 1913

*In 1,000 Tons*

1913	Hard coal	Coke	Hard coal briquettes	Brown coal	Brown coal briquettes	Total
Export . . . . .	34,574	6,411	2,303	601	861	44,209
Import . . . . .	10,540	593	27	6,987	121	18,268
Export surplus . . . . .	24,034	5,818	2,276	...	740	25,941
Import surplus . . . . .	...	...	...	6,927	...	...

Bohemian brown coal (*Tschechoslowakei*). The Bohemian coal is, therefore, absolutely essential for the German industries and Germany must find a compensation in the Upper Silesia coal for the necessary hard coal of the *Tschechoslowakei* so that the import of Bohemian coal to Bavaria and Saxony is assured.

port of English coal stopped, as did the German export to the enemy countries. In consequence of the increasing requirements of the war the export to the Neutrals had to be more and more limited. The end of the war did not bring any improvement of this condition but, on the contrary, production sank at once one-third and

#### EXPORTS OF COAL FROM GERMANY TO POLAND AND GERMAN AUSTRIA, 1919-20

*In 1,000 Tons*

	Poland	German Austria
<b>1919</b>		
September . . . . .	25	115
October . . . . .	36	120
November . . . . .	97	135
December . . . . .	124	104
<b>1920</b>		
January . . . . .	222	91
February . . . . .	237	129
March . . . . .	288	131
April . . . . .	284	171
May . . . . .	268	204

forced further limitations in the shipments to the Neutrals. The coal famine in our own country forced us, notwithstanding that coal was one of the few means of trade with which we still could buy in neutral countries the most essential food and raw materials, to lessen the export to the neutral countries, Holland, Switzerland, Denmark and Sweden, in the following manner: 1916, 13,721,000 tons; 1917, 7,991,000 tons; 1918, 5,886,000 tons; 1919, 1,665,000 tons.

#### FORCED SHIPMENTS

In place of this export for which Germany had received the shipments of essential foodstuffs, from September, 1919, regular shipments to the Entente for which Germany received no equivalent were made. The monthly shipments started in September, 1919, with about 500,000 tons of hard coal, coke and brown coal briquettes. They increased in time and amounted in May and June of 1920 to over one million tons. At the same time Germany was forced to increase greatly the shipments to Poland and German Austria, as is shown by the preceding table:

The extent to which this increase

reflected on the German coal supply is shown by the following table on which shipments are expressed in percentages of the total available coal supply in Germany (production less the requirements for the mines and miners):

Shipments to the Entente, which were increased to 1,000,000 tons by the greatest amount of effort, had to be increased at once, beginning with the month of August, in accordance with the conditions of Spa to 2,000,000 tons. This arrangement is to be effective for six months. In case the full amount can not be entirely furnished the Ruhr coal region will be occupied by the Entente. The whole supply shall be furnished (save for 100 to 200 thousand tons of brown coal briquettes) in hard coal and coke with the exception of small amounts from Upper Silesia and Aachen in Ruhr coal. This should be especially noted because the substitution of hard coal by brown coal is possible only to a certain degree and, as stated above, the limit has almost been reached in Germany. The shortage of about one million tons from July to August affects, almost exclusively, consumers of hard coal. Even though the coming scarcity affects nearly every consumer, who has less hard coal now

PERCENTAGE OF GERMAN COAL TAKEN FOR FORCED SHIPMENTS

	Shipments to the Entente	Shipments to the Entente, Poland and Austria
<b>1919</b>		
September.....	6.0%	7.7%
October.....	7.6	9.3
November.....	8.8	11.8
December.....	9.3	12.0
<b>1920</b>		
January.....	5.8%	9.4%
February.....	8.7	12.9
March.....	6.9	11.8
April.....	9.3	14.7
May.....	12.6	18.1

than before, it compels him to secure and use the still available brown coal; yet not too much can be hoped for in that line. The cheaper brown coal was for many industries already a fixed policy even before the war. Its use can be further developed but not overdone. Retarding here effects especially the rebuilding of furnaces, because all machine shops require an exceedingly long time of delivery on account of the scarcity of coal; because for very many purposes the substitution of brown coal is not at all possible. Therefore the hard coal famine threatens to become more and more acute.

The demands of Spa affect Germany all the more severely because the second largest hard coal region, namely that of Upper Silesia, is no longer at the free disposition of the German coal management. Since the occupation of the Upper Silesia Plebesite district, the control of the coal distribution for Upper Silesia went over to the Plebesite Commission. In vain the German government has called attention to the severe damages caused by taking Upper Silesia away from the central disposition of the Imperial Commissioners of the coal distribution. The Plebesite Commission has done everything to side-step the influence of the Imperial Commission and now distributes the produced coal in such a manner that Germany will have last consideration. The following preferences will now be effective: Poland, Austria-Hungary, Italy, German railroads, Upper Silesia and the rest of Germany. For the first mentioned preferred countries definite amounts have been set which have to be shipped irrespective of what the conditions of production and transportation are. Consequently, the coal supply of Germany is not only limited but Germany has also to carry the whole risk of the fluctuating figures of production and the changing conditions of transportation.

In both cases the fluctuations are very large because the continual political and economical unrest causes shortage of production again and again, and because the conditions of transportation in Upper Silesia have strong tendencies toward uncertainty. The supply of railroad cars in Upper Silesia has to suffer more on account of irregularity than in the Ruhr Region. Moreover, the shipping on the Oder, on account of the uncertain navigation conditions, has to suffer extraordinary fluctuations and is interrupted in the winter for months. All these fluctuations of production and delivery strike in all severity the remaining supply of accessible coal in the Upper Silesia coal district. It was promised in Spa that Germany should also have a representative in the Commission which has to distribute the Upper Silesia coal. To what degree the German interests shall receive consideration remains to be seen. In any case this is certain: Upper Silesia cannot relieve the supply of the Ruhr region, and more than likely Germany will be heavily burdened on account of Upper Silesia. This burden will be taken away when the Plebesite, as we hope, completely unites again Upper Silesia with Germany; and the Upper Silesia coal region will again come under the control of the German government.

#### REACTIONARY EFFECT ON GERMAN INDUSTRY

We demonstrated above in exact figures and in percentages the continually increasing portion which the forced shipments demand of the German coal production since December, 1919. The home consumption is more and more limited by this demand. It must also be considered that, since 1916, a rationing to the coal consumer

took place, which had to reckon from year to year with an increasingly greater reduction. After the revolution of November, 1918, had changed conditions apoplectically for the worse, the rationing of the coal limited the consumer to a minimum, which now puts the whole production in Germany under the most severe pressure, for the disadvantage to the consumer consists not only in the reduction of the permitted supply but also in the inferior quality of the coal, as compared with that used in time of peace. The coal is not so pure as in prewar times, because the changed conditions of labor and the worn-out technical machinery does not permit the thorough separation of the coal as before. The consumer also does not get full benefit of the coal, because the machinery and boilers in the whole country are now very much worn out from the lack of thorough repair during the long years of war. Finally, on account of the strict rationing, the best quality of coal cannot always be furnished for individual consumption.

If more blood is to be tapped from a bloodless industrial body as happened in December, 1919, and in August, 1920, in a still more rigorous way, the effect of such an operation is naturally going to be more dangerous than it would be to a healthy industrial body. We in Germany have reached in many respects in the rationing of the coal a limit which cannot be trespassed unless all industry comes to a standstill. As an example we mention the gas plants, which have been rationed to two-thirds of their needs and cannot get that amount. They keep up their operation through additional water-gas and through serving only at intervals. A further reduction in this respect is, therefore, impossible, because a want of gas in the big cities would lead not only to a standstill of many

other enterprises and through that to an increase of a dangerous number of unemployed people, but also to whole sections where laborers live, being robbed of the only means of cooking. The same conditions exist in the case of electrical establishments, which are the source of power for many industrial plants and which must furnish the power for conveying the workers to their destinations on the street cars. Here also still further limitations would cause a sharp increase in the number of idle people. In the case of the railroads further limitations would be very dangerous because disturbances in the traffic would disorganize the whole industrial life. In this connection we must also mention the farming industry, which always has been neglected so far as the coal supply is concerned. This has brought about the well-known sad lack of food supply through all of Germany, and a further reduction would make conditions still worse. The home consumption can hardly be more limited. All these conditions prove that almost the whole burden of this increasingly bad coal situation must be carried exclusively by industry.

In figures the conditions can be stated approximately in the following manner: The consumption of hard coal (coke counted as coal) for industry, agriculture and home supply (not including railroads, gas and electrical plants) amounted in the monthly average of 1913 in Germany, in its now smaller size, to 8 million 350 thousand tons. Since September, 1919, the monthly figures amount to from 53 to 59 per cent of the consumption of 1913, or, expressed in absolute figures, to between 4.4 and 5 million tons. Such reduced industry must now, beginning with August 1, carry the whole burden of the demands of Spa, which now take away from the whole German coal

supply a further amount of almost one million tons.

The German industry is hereby pressed down still further below the low level which it had to overcome immediately after the revolution in the beginning of the year 1919. The only difference is, at that time uncalculable and uncontrollable forces were active, forces which did not think of the destruction they brought about in the industrial life. Now, however, a similar state of affairs is brought about by cool, calculating diplomats. During the latter part of 1919 Germany had about 2 million unemployed people. This figure has been reduced approximately to between 800,000 and 900,000, because all positive elements in the nation now work with the greatest endurance on the industrial construction without becoming discouraged (about 350,000 are receiving support at this time). With one blow this whole structure is now again destroyed. The number of idlers will swell. To them must be added the soldiers who, according to the disarmament conditions of Spa, must leave the army. This dreadful number of idlers must be looked upon not only from the economical and social standpoint, but also from the political standpoint, where they appear as a menace of the worst kind. The misery of idleness is the best ground on which communistic and bolshevistic ideas can spread. Economically, such a condition of our industry means a loss of production which will affect first of all our export. If we are not already in a condition to pay for the necessary import of foodstuffs and raw material without export, then through the imposition of the conditions of Spa vanishes every hope that Germany may be in a situation through her export production to provide for her own life support.

#### MEANS TO IMPROVE THE COAL SITUATION

Self-evidently even under these hard conditions Germany will do everything to fulfill the demands of Spa and to preserve at the same time the German industry. To this end all means, even the smallest, must be utilized.

A further saving of coal through a constricted control of the coal consumed by the state does not promise much success. As with all forced regulations in economical life so also here by the coal distribution of the state here and there a few tons of coal may reach a place through the illegal production and distribution (*Schleichhandel*) of coal contrary to the will of the Imperial Coal Commissioner. Not much success is to be expected in this because since 1916 the control of the Imperial Coal Commissioner has again and again been extended and improved.

A certain improvement of the conditions might be hoped for through the efforts to substitute the brown coal for the hard coal, but even here not too much can be expected, for, as has been mentioned above, this method has been used for many years partly by private interest and partly under the military pressure of the war industry. Further extension of brown coal production requires a great extension of control. A further consumption of the brown coal requires a reconstruction of the furnaces. Considering the limited efficiency of machine shops such a program cannot be introduced suddenly.

The only effective means of improving the coal situation is to increase the production of coal, especially of hard coal. The prospects for this are not favorable. First, we must mention the technical end. The great difficulties in getting machinery, tools and other materials are increased through this new loss of coal from our economical life.



Greater, however, than the technical difficulties are the labor conditions. Increases in the number of workers find their limits in the dwellings that are on hand. A movement on a great scale to build homes for miners has been started, but in comparison with the demands relatively few dwellings have been constructed. This can be easily understood when the fact is taken into consideration that a house which cost the laborer less than 5,000 marks before the war now costs him almost 100,000 marks. It has, however, been impossible to increase the number of laborers to any appreciable extent. In the hard coal district, the Saar Valley excluded, the increase has been from about 550,000 men to about 750,000 men. But shorter working hours and the weaker physical condition of the laborers hold the production far below the level in time of Peace.

Poor food and clothing affect the efficiency of the worker. An energetical change for improvement has to be made in these fundamentals of existence. This, however, cannot be done with the 5 goldmark, which is the price that has been fixed at Spa for a ton of coal delivered to the Entente; for, in a monthly shipment of 2 million tons, this amounts to 10,000,000 goldmarks, or distributed among 900,000 laborers in the whole mining industry and 25 shifts per month, it is less than one-half goldmark (about one-eighth of a dollar) for a shift. This is no real help. Better food demands higher wages for a family. This was recognized in Spa and it was agreed to give us credit, according to our shipments of coal. At this time much uncertainty exists about the details. Furthermore, it must also be taken into account that a credit, which will probably be removed in the next year, lays a further burden on Germany and is of no benefit to our economical life. More time must be

allowed so that the results of better food may be observed in increased efficiency and greater efforts, and that by these production may be increased. The real aim is the possibility of paying for the food and raw materials we have to import from other countries with our own labor and products.

While in respect to the credit agreement of Spa and the food supply from this year's crops, certain hopes may rise, the political moment in the labor question is not favorable to an increase in the production. Looking back over the last two years it can be seen how the coal production has been influenced by political events. As an example it may be mentioned that the hard coal production was 14.1 million tons in October, 1918 and 9.3 million tons in December, 1918. The revolution occurred in November, 1918. In March, 1919, the production of coal was 10.1 million tons. In April, 1919, it was only 5.7 million tons, the decrease being due to a strike with strong political tendencies.

In March, 1920, the production in the Ruhr district would have increased to 7 million tons without the Kapp episode, but on account of it the production reached only 6.4 million tons. The question of the production of coal, therefore, is not only a technically economical one, but the political factors must also be considered. In this respect the future seems to be dark. Among the coal miners is to be found a strong desire to improve our economic life. It was an act of great importance when the Ruhr miners passed the resolution in February, 1920, to work overtime twice a week, that is, twice  $3\frac{1}{2}$  hours in addition to their seven-hour shifts. Although poor nourishment weakens the desire to work overtime, still a majority of the miners are working extra hours. Therefore, as the following statistics will

show, the Ruhr district had a relatively good production after the Kapp episode and its consequences had been removed.

At the same time, however, Upper Silesia shows a reduction in production caused mainly by political reasons. Similar changes can be seen in other districts. The latest figures, which were not available when we finished this work but have since come into my possession, show no better results. On the contrary, from July on they are considerably more unfavorable. The spirit of quiet diligent work, which the overtime shifts in the Ruhr district seemed to predict, is not supported but injured

trifling causes may bring on explosions. It is only possible to reduce the danger gradually, when by a permanent opportunity to work greater stability is brought into the masses of workers and when the weakened authority of the state has been strengthened so that any revolution can be subdued at the start. Instead of this the contrary is done. To take away immense quantities of coal from German consumption threatens our industry with numerous restrictions and stoppage; our laborers, with idleness. It reduces our export, which could put us on our feet again. The most dangerous ground for disorders in the interior has thus been

PRODUCTION OF COAL  
*In 1,000 Tons*

	Total	Hard Coal					Brown Coal	
		Ruhr	Upper Silesia	Lower Silesia	Saxony	Aachen	Raw coal	Briquettes
1920								
January.....	10,337	6,688	2,687	367	336	185	8,542	1,791
February.....	10,179	6,833	2,414	355	333	171	8,408	1,803
March.....	10,131	6,382	2,836	276	375	190	7,816	1,645
April.....	9,984	6,477	2,582	334	362	161	8,807	1,884
May.....	10,117	7,027	2,247	315	304	151	8,587	1,861

by the atmosphere now created in Germany by the execution of the demands of Spa.

The whole German population is restless. Political and social conditions are uncertain for the whole nation as well as for the individual. The largest hard coal region, the Ruhr district, is now under the threat of the Entente to take military action in case the demands of Spa are not fulfilled and a majority of the people consider it impossible to comply with these demands. Such an occupation will be looked upon by the laborers as a military action against themselves. In this tense atmosphere

prepared, while Bolshevism, with its victorious army, knocks at our gate in the East. At the same time, by the disarming conditions, the only weapon by which disorder could be suppressed is taken out of the hands of the government. A sad prospect, indeed! The coal shortage forces idleness on our workers and renders worse the conditions of life for us all. Restlessness will follow, which may be abused by agitators and may become very acute, especially in the mining districts. There is no power in the state to suppress these disorders. Political restlessness spells diminished production of coal.

In case the demands of Spa are not fulfilled the Entente threatens to occupy the Ruhr region. This threat itself has a disquieting effect on the miners of the Ruhr Valley and affects the production unfavorably. This threat put into action will cause a considerable reduction in the mining of the coal. The Entente will, of course, take its claim in the number of tons beforehand. Germany will have to suffer still further restrictions, which finally will choke the industrial life kept up

thus far by much labor and effort. As terrible as this prospect is, still the future of Germany will be darker in case Upper Silesia is torn from the German Republic. Directly and indirectly the loss of the Upper Silesia mines will increase all the difficulties which have been described above. Germany, separated from Upper Silesia, will be a bloodless and sick economic body, the wrestling place of a desperate population, which has nothing to hope for and nothing to lose.